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Abstract

EMI emission is reduced by jittering the switching frequency of a switched mode power supply. An oscillator with a control input for varying the oscillator's switching frequency generates a jittered clock signal. In one embodiment, the oscillator is connected to a counter clocked by the oscillator. The counter drives a digital to analog converter, whose output is connected to the control input of the oscillator for varying the oscillation frequency. In another embodiment, the oscillator is connected to a low frequency oscillator whose low frequency output is used to supplement the output of the oscillator for jittering the switching frequency. The invention thus deviates or jitters the switching frequency of the switched mode power supply oscillator within a narrow range to reduce EMI noise by spreading the energy over a wider frequency range than the bandwidth measured by the EMI test equipment.

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